

ORIGINAL

UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF TEXAS
FORT WORTH DIVISION

U.S. DISTRICT COURT
NORTHERN DISTRICT OF TEXAS

FILED

MAY 22 2015

CLERK, U.S. DISTRICT COURT

By _____
Deputy

HENRY LEE SIMS, JR., *et al.*,

Plaintiffs,

VS.

KIA MOTORS AMERICA, INC. and
KIA MOTORS CORPORATION,

Defendants.

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CASE NO. 4:14-cv-00045-A

**PLAINTIFFS' RESPONSE IN OPPOSITION TO DEFENDANTS' MOTION TO EXCLUDE
TESTIMONY OF PLAINTIFFS' EXPERT JERRY WALLINGFORD**

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I. INTRODUCTION¹

Defendants ask this Court to exclude the testimony of plaintiffs' expert, Jerry Wallingford, claiming that he lacks the requisite qualifications to offer expert testimony and criticizing the methodology he employed in reaching his opinions.

To be charitable, defendants do not accurately portray Mr. Wallingford's opinions or the methodology he utilized in reaching them. Mr. Wallingford's credentials are impeccable and his methodology has been accepted as reliable by dozens of courts in numerous jurisdictions.

Defendants also carefully omit evidence or legal authority that does not support their arguments. For example, Defendants spend a sizeable portion of their briefing attacking Mr. Wallingford's opinion that fuel tank shields and/or reinforcing fuel tank straps constitute a "safer alternative design" for the 2010 Kia Soul.² Defendants' claim that Mr. Wallingford's opinions are unreliable because: (1) he did not establish that these proposals are either technically or economically feasible, and (2) he did not assess whether the benefits of using his alternative designs outweigh the potential risks.³

These claims are not accurate. To start, defendants *know* that both technologies are feasible because they have employed them on millions of Kia vehicles. In fact, starting in 2014 defendants began using reinforcing straps to secure the fuel tank of the Kia Soul—the same technology Mr. Wallingford opined should have been used on the 2010 model.⁴ And, it is undisputed that this technology was widely used by defendants before 2010. In fact, only two Kia models presently use any method other than reinforcing straps to secure their fuel tanks.⁵

¹ Defendants' background information regarding the crash and the nature of Mr. Wallingford's defect allegations are generally accurate and are not reiterated in this brief. Additional information is also found at Dkt. #62, pp. 2-5.

² Def's Motion to Exclude Wallingford, pp. 18-25.

³ *Id.*

⁴ Exhibit A, App. at p.6.

⁵ Exhibit A, App. at p. 5.

Reinforcing straps are even more widely used by Kia's competitors. Several vehicles that Kia identifies as competitive to the Kia Soul use fuel tank straps.⁶ Straps are so ubiquitous that Jack Ridenour, defendants' defect expert, cannot name a single Ford vehicle manufactured in the U.S. since the mid-1970's that has used anything *other* than reinforcing straps to secure their vehicles' tank.⁷

Metal and plastic fuel tank shields have also been widely-used in the automotive industry for many decades, including on certain Kia vehicles.⁸ And, all of the fuel systems designed by defendants' expert, Mr. Ridenour, protect their fuel tank with tank shields.⁹

Under Texas law, the use of a proposed safer alternative design by others in the industry is sufficient to establish feasibility.¹⁰ Here, the fact Mr. Wallingford's alternative designs were widely-used in the industry, including on Kia vehicles, shows that the alternatives were technologically and economically feasible.

Likewise, defendants' claim that there is no evidence that Mr. Wallingford analyzed whether the safety of his alternative designs outweigh the potential risk is meritless. Mr. Wallingford specifically addressed the utility of his proposed alternative designs in his report.¹¹ Moreover, these technologies have existed for decades, and each has undergone extensive testing to confirm their effectiveness, including testing performed by both Mr. Wallingford and Mr. Ridenour. Lastly, defendants cannot seriously question the utility of these alternatives, considering that most Kia vehicles use one or all of these technologies.

Defendants also suggest that Mr. Wallingford was obligated to conduct testing to support his safer alternative designs. This, too, is incorrect. In the past two weeks the Texas Supreme

⁶ Exhibit D, App. at p. 40.

⁷ Mr. Ridenour worked for Ford from 1971 to 2008. Exhibit B, App. at pp. 8; 13-14.

⁸ Exhibit B; App. at p. 9; Exhibit C, App. at p. 19.

⁹ Exhibit B, App. at p. 10.

¹⁰ See *Goodner v. Hyundai Motor Co., Ltd.*, 650 F.3d 1034, 1043-1044 (2011).

¹¹ Curiously, despite deposing Mr. Wallingford for several hours, defendants did not ask him a single question about the costs of his alternative designs or whether there exist risks that might outweigh the safety benefits.

Court has reiterated that testing is not a prerequisite to establishing a “safer alternative design.”¹² Rather, Mr. Wallingford need only establish that alternatives he proposes are “capable of being developed.” That standard is easily satisfied because Mr. Wallingford’s alternatives are *more* than “capable of being developed”; each has already been developed.

Defendants may not agree with Mr. Wallingford’s opinions. But, they have provided no justification for his exclusion as a trial witness. Defendants’ motion should be denied.

II. MR. WALLINGFORD’S QUALIFICATIONS

Mr. Wallingford’s credentials in the field of automotive engineering are unassailable. He is a professional engineer licensed and certified by the State of Texas.¹³ Mr. Wallingford has more than 53 years of experience in automobile design, testing, development and repair.¹⁴ Mr. Wallingford’s professional and education experience runs the gamut, including working as an auto mechanic, a Development Engineer at Ford Motor Company, a Project Engineer, a Senior design Engineer and, since 1982, working as a Senior Forensic Engineer at Verifact Corporation, a company he founded.¹⁵

Mr. Wallingford holds professional memberships with the Society of Automotive Engineers, the American Society of Mechanical Engineers and the American Academy of Forensic Sciences.¹⁶ Mr. Wallingford has also been selected to serve on the technical committee for the Society of Automotive Engineers for Fire Safety.¹⁷

Mr. Wallingford has continued receiving ongoing engineering education and training throughout his career. Since 1994 alone, Mr. Wallingford has completed at least six different courses related to the investigation of vehicle fires including training provided by the University

¹² *Genie Indus., Inc. v. Matak*, No. 13-0042, 2015 WL 2173786 (Tex. May 8, 2015)

¹³ Exhibit C, App. at p. 18.

¹⁴ *Id.*

¹⁵ *Id.*

¹⁶ *Id.*

¹⁷ *Id.*

of Washington, College of Engineering, and Texas A&M University's Fire Protection Training Division for Scientific Fire Investigation.¹⁸

Based upon his education, training and experience, Mr. Wallingford has been qualified to testify as an expert witness at trial at least 120 separate occasions, including on issues related to design flaws in a vehicle's fuel system and regarding fire-related dangers inherent in a vehicle's fuel system.¹⁹

III. LEGAL STANDARDS GOVERNING EXPERT TESTIMONY

FRE 702 permits expert testimony if: (1) the testimony is based on sufficient facts or data; (2) the testimony is the product of reliable principles and methods; and (3) the witness has applied the principles and methods reliably to the facts of the case. In evaluating whether expert testimony satisfies FRE 702, the Court must determine three things: (1) whether the expert is qualified in the relevant field; (2) whether the testimony is relevant to the task at hand; and (3) whether the testimony "rests on a reliable foundation."²⁰

Daubert set forth a non-exclusive checklist for trial courts to use in assessing the reliability of expert testimony. The specific factors are (1) whether the expert's technique or theory can be or has been tested; (2) whether the technique or theory has been subject to peer review and publication; (3) the known or potential rate of error of the technique or theory when applied; (4) the existence and maintenance of standards and controls; and (5) whether the technique or theory has been generally accepted in the scientific community. No single factor is dispositive of the reliability of a particular expert's testimony and the trial court is vested with considerable discretion when facing a challenge to the admissibility of expert testimony.²¹ As

¹⁸ *Id.*, App. at p.19.

¹⁹ *Id.*, App. at p. 19.

²⁰ *Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579, 597 (1993).

²¹ *Heller v. Shaw Industries, Inc.*, 167 F.3d 146, 155 (3d Cir. 1999).

the explained in *Kumho Tire*, a Rule 702 inquiry is a “flexible one” and the trial court’s determination will not be disturbed unless “manifestly erroneous.”²²

Rejection of expert testimony is intended to be the exception, not the rule: “The trial court’s role as gatekeeper is not intended to serve as a replacement for the adversary system.”²³ As the Supreme Court recognized in *Daubert*, “Vigorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence.”²⁴

IV. ARGUMENT AND AUTHORITIES

A. Mr. Wallingford’s Testimony on Fire Related Issues

The Kia Soul has a fuel pump access port that allows direct access to the top of the fuel tank from inside the passenger compartment. This port results in an 8.5 inch-diameter hole in floor pan of the vehicle, located immediately beneath the rear seat cushion.²⁵ The Kia Defendants have elected to utilize a 1/8 inch-thick round plastic cover to seal this hole when the vehicle is in operation. On the day Henry Sims, Sr. died, the only thing separating the underside of his seat cushion and the top of the fuel tank was this piece of plastic.

Mr. Wallingford has opined that the use of this thin piece of non-fire-resistant plastic as a barrier between the fuel tank and the passenger cabin, was unreasonably dangerous.²⁶ As a safer alternative design, Mr. Wallingford stated that the Kia Defendants should have utilized a metal cover for the 8.5 inch-diameter hole beneath the rear seat.²⁷ It is not disputed that metal covers are widely-used by others in the industry, including the Kia Defendants.

²² *Eiland v. Westinghouse Electric*, 58 F.3d 176, 180 (5th Cir.1995)

²³ *United States v. 14.38 Acres of Land Situated in Leflore County, Mississippi*, 80 F.3d 1074, 1078 (5th Cir. 1996)

²⁴ *Daubert*, 509 U.S. at 595. see also *Obrey v. Johnson*, 400 F.3d 691, 696 (9th Cir. 2005). (“[T]rial judges acting as gatekeepers under *Daubert* must not assume ‘the role of St. Peter at the gates of heaven, performing a searching inquiry into the depth of an expert witness’s soul’ and thereby usurp the ‘ageless role of the jury’ in evaluating witness credibility and weight of the evidence.”).

²⁵ Defs’ Motion to Exclude Wallingford, p. 6, Figure 3.

²⁶ Exhibit D, App. at pp. 41-42;48;50;53.

²⁷ *Id.*, App. at p. 53.

Defendants argue that Mr. Wallingford lacks credentials to render opinions on fire-related issues. Defendants claim that Mr. Wallingford has “no specific education, training or experience that sets him apart” for purposes of fire-related issues.²⁸ Defendants list several organizations they believe Mr. Wallingford needed to join before he could be qualified as an expert and criticize him for failing to take a college-level course on combustion.²⁹

Defendants’ characterization of Mr. Wallingford’s credentials to opine on fire-related issues is incomplete and inaccurate.³⁰ Regardless, Mr. Wallingford’s qualifications to opine regarding automotive defects are not in question. This is a critical point because most of the “fire-related” opinions that Defendants contest are undisputed facts.

For example, defendants criticize several statements from Mr. Wallingford’s that the fuel pump access cover was “consumed” in the vehicle fire.³¹ They argue that it is inappropriate for Mr. Wallingford to offer this testimony.

Defendants have hired Dr. Jeff Colwell as their expert witness regarding the cause, origin and propagation of this vehicle fire. During his deposition, Dr. Colwell agreed that the fuel pump access cover was consumed in the fire:

- Q. Now, were you able to ascertain what happened to the fuel pump access cover after the fire started?
- A. No. It’s missing from the —from the port it’s normally sitting on.
- Q. Does that—what does that tell you?
- A. It was probably consumed by the fire.
- Q. All right. Melted essentially. Is that fair?
- A. Melted and/or consumed by combustion.³²

²⁸ Def’s Motion to Exclude Wallingford, p. 12, I. 1-2.

²⁹ *Id.* at p 10.

³⁰ As highlighted above, Mr. Wallingford is a member of the Society of Automotive Engineers technical committee regarding Fire Safety. In addition, for the past 20 years, Mr. Wallingford has taken numerous college-level courses pertaining to vehicle fire investigation. Exhibit C, App. pp.

³¹ Def’s Motion to Exclude Wallingford, pp. 10-11.

³² Exhibit E, App. at p. 60.

Defendants next criticize Mr. Wallingford's statement that the fuel pump access cover was not fire resistant and that the use of the plastic cover therefore contributed to plaintiffs' injuries.³³ However, Dr. Colwell agrees that there is no evidence that the plastic cover was fire resistant.³⁴ Finally, Dr. Colwell did not ascertain whether fire melted the plastic cover before or after the rear seat passengers died.³⁵

Defendants seek to turn *Daubert* on its head by preventing Mr. Wallingford from testifying about undisputed facts, including those endorsed by their own expert. However, *Daubert* was not intended to shield a defendant from harmful or embarrassing evidence that is undisputed. Mr. Wallingford is qualified to testify that the use of a plastic, flammable cover inches above the fuel tank and inches below the rear-seat passengers constitutes a defective design. Defendants are certainly entitled to offer evidence to the contrary.

B. Mr. Wallingford's Testimony Regarding Passenger Injuries

Defendants also spend a considerable portion of their briefing criticizing Mr. Wallingford's "opinions" regarding the injuries sustained by the rear-seat passengers. Specifically, defendants contest Mr. Wallingford's statements that the rear seat passengers died from fire-related injuries and/or did not die in the initial collision.³⁶

Again, neither of these statements can honestly be disputed. The Tarrant County Medical Examiner's Office performed autopsies of the three rear-seat passengers who died in the fire. The autopsy report regarding Henry Sims, Sr. was prepared for the Tarrant County Medical Examiner's Office by Dr. Nizam Peerwani.³⁷ Dr. Peerwani's conclusions regarding the cause of death for Mr. Sims were "inhalation of smoke and carbon monoxide due to post crash vehicular fire." Dr. Peerwani's postmortem findings concluded that Mr. Sims' death was a "Fire

³³ Defs' Motion to Exclude Wallingford, p. 10.

³⁴ Exhibit E, App. at pp. 58-59.

³⁵ *Id.* App. at pp. 60-61.

³⁶ Defs' Motion Exclude Wallingford, pp. 12-13.

³⁷ Exhibit F, App. at pp. 62-75.

fatality.” Mr. Wallingford made clear during his deposition that he had reviewed Dr. Peerwani’s autopsy report and was relying upon it in reaching his own opinions.³⁸

Dr. Colwell also agrees that the three passengers in the rear seat died in the vehicle fire:

Q. But your -- regardless of which path the fire took, there's no question in your mind that the fire entered the passenger cabin?

A. Yes. Clearly the fire entered the passenger cabin.

Q. And as a result, the individuals seated in the passenger cabin died?

A. Yes. The result, that they did not exit the vehicle and were in the vehicle when the fire spread into the vehicle, yes, that resulted in their fatalities.³⁹

Defendants also ignore the additional, uncontroverted eyewitness evidence that Mr. Sims and the other rear seat passengers did not die in the initial crash. The two individuals seated in the front seat of the Kia Soul, Ms. Beverly Fuller and Ms. Alonda Harper, both escaped the vehicle with minor injuries.

The Kia Defendants’ attorneys deposed both Ms. Fuller and Ms. Harper in this and in a related state court action.⁴⁰ Ms. Fuller testified that she personally observed that Mr. Sims was alive and conscious following the collision:

Q. [Y]ou mentioned that one of the first things you did after the vehicle came to a stop was you looked around to make sure everybody was okay, and everybody appeared to be okay. Is that right?

A. Yes.

* * * * *

Q. And you also looked at Mr. Sims and he was okay as well?

A. Yes.

Q. He was certainly awake?

A. Yes.

Q. And that's after the initial collision?

³⁸ *Id.* App. at pp. 62-63.

³⁹ Exhibit E, App. at pp. 56-57.

⁴⁰ *Bruce Smith, et al. v. Kia Motors America, Inc., et al.* Tarrant County District Court Cause No. 048-266472-13. The Kia Defendants recently settled with the plaintiffs in this related action.

A. Yes.

Q. And you're sure about that. Right?

A. I'm sure about that, yes.⁴¹

Ms. Fuller also observed that the rear seat passengers were screaming after the crash:

Q. And do you know who was doing the yelling and the screaming, in terms of do you know if all three occupants were still conscious, or do you know exactly who was doing the yelling or screaming?

A. I recall that, you know, all three occupants, they were conscious. You know, I recall that. And I recall that screaming was coming from all the occupants in the back seat.⁴²

Ms. Harper's testimony supports Ms. Fuller's that all three survived the crash:

Q. And do you know if Ms. Smith or Mr. Sims were able to undo their seat belts at all?

A. No. They were trying.

Q. And you say they were trying. Were you actually watching them try –

A. Yes.⁴³

Obviously, if Mr. Sims was conscious, screaming and trying to undo his seat-belt, he survived the crash. Mr. Wallingford properly relied upon this type of evidence in formulating his opinions regarding the defects he observed in the 2010 Kia Soul. FRE 703 makes clear that this kind of evidence may appropriately be relied upon by expert witnesses.

C. Safer Alternative Designs - Feasibility

Mr. Wallingford opines that a fuel tank shield is safer alternative design for the 2010 Kia Soul.⁴⁴ Defendants argue that Mr. Wallingford should be precluded from testifying because they claim he has not established: (1) that a fuel tank shield was technologically feasible; (2) was

⁴¹ Exhibit G, App. at pp. 77-78.

⁴² Exhibit H, App. at p. 80.

⁴³ Exhibit I, App. at p.82.

⁴⁴ Exhibit D, App. at pp. 37-40; 44-53.

economically feasible; and/or (3) that the benefits of using a shield outweigh the risk.⁴⁵

Defendants also suggest that Mr. Wallingford “simply conceptualized possible fuel tank shield designs” and offered no concrete examples of his designs.⁴⁶

Again, defendants’ arguments do not hold up to scrutiny. Under Texas law, a safer alternative design means a product design other than the one actually used that in reasonable probability:

- (1) would have prevented or significantly reduced the risk of the claimant's personal injury, property damage, or death without substantially impairing the product's utility; and
- (2) was economically and technologically feasible at the time the product left the control of the manufacturer or seller by the application of existing or reasonably achievable scientific knowledge.⁴⁷

1. Technical Feasibility

As discussed above, a claimant can establish the feasibility of a safer alternative design by showing its use by others in the industry.⁴⁸ Since at least the 1970s, with the Ford Pinto recalls, automakers have employed fuel tank straps and tank shields as a means to protect gas tanks from rupturing. For example, Defendants’ expert, Jack Ridenour, worked at Ford during the 1970s as a fuel system designer.⁴⁹ Mr. Ridenour confirms that fuel tank shields and fuel tank straps have been used for several decades.

During the 1970s Ford developed highly-engineered polyethylene shields designed to protect its fuel tanks and minimize the risk of rupturing.⁵⁰ Fuel shields were implemented, in part, to address the defects rendering the Ford Pinto’s fuel tank vulnerable to rupturing during a

⁴⁵ Defs’ Motion to Exclude Wallingford, pp.14-15.

⁴⁶ *Id.*

⁴⁷ Tex. Civ. Prac. & Rem. Code Ann. § 82.005

⁴⁸ See *Goodner v. Hyundai Motor Co., Ltd.*, 650 F.3d 1034, 1043-1044 (2011), citing *Honda of Am. Mfg. Inc. v. Norman*, 104 S.W.3d 600, 607 (Tex.App.—Houston [1st Dist.] 2003, pet. denied).

⁴⁹ Exhibit B, App. at p. 8.

⁵⁰ *Id.* at p. 9.

crash.⁵¹ Mr. Ridenour included fuel tank shields on virtually all of the fuel systems he was responsible for designing while at Ford:

Q. In terms of the five vehicles that you mentioned that you had system responsibility for, I won't ask you to name them again, how many of those utilized these polyethylene shields?

A. All of them.⁵²

Mr. Ridenour also confirmed the near-universal use of fuel tank straps on Ford vehicles, including each vehicle he responsible for designing.⁵³

In the 1990s, Ford again faced concerns that the fuel tanks of certain vehicles known as its "Panther Platform" vehicles were susceptible to rupturing.⁵⁴ Vehicles using this platform, including many police vehicles, were occasionally involved in severe crashes, including with heavy trucks and with speeds exceeding 100 miles per hour.⁵⁵ To protect against tank rupture under these kinds of severe conditions, Ford elected to use shields to minimize the risk of tank rupture:

Q. The shields were intended to prevent the tank from rupturing, correct?

A. I agree.

Q. And that was the engineering solution that Ford Motor Company when you were an employee crafted to try to prevent the fuel tank of these Panther platform vehicles from puncturing, correct?

A. That was part of the solution. That was one part of it.⁵⁶

Ford also conducted extensive testing to determine if shields on the Panther Platform fuel system were effective to address these severe risks of tank puncture.⁵⁷ After completing its testing, Ford concluded that its engineering fixes were effective:

⁵¹ *Id.* at p. 10.

⁵² *Id.* at p. 10.

⁵³ *Id.* at p.11-14.

⁵⁴ *Id.* at p. 15.

⁵⁵ *Id.* at pp. 15-16.

⁵⁶ *Id.* App. at p. 15

⁵⁷ *Id.* App. at pp. 15; 17.

Q. It improved the performance and safety of the vehicle enough that Ford believed it would implement these fixes?

A. Ford did implement the upgrades, and they felt that they were effective upgrades.

Q. Okay. Because they wouldn't make these -- they wouldn't implement these fixes if they believed they were ineffective, correct?

A. I agree.⁵⁸

As Mr. Wallingford point out in his report, Kia has used fuel tank shielding on other models since at least 1998, including the Kia Sportage and the Kia Sorrento. In fact, marketing information for the Sorrento touts the safety benefit of "skid plates": "A sturdy underbody skid plate is standard giving protection from rocks and tree stumps."⁵⁹ Kia has also used fuel tank straps on most of its vehicles. Finally, Kia's corporate representatives confirm that it has used metal fuel pump access covers on other Kia vehicles, as well.⁶⁰

Consequently, the technological feasibility of fuel tank shields, fuel tank straps and metal fuel pump access ports cannot seriously be disputed. This technology has been utilized for decades and was widely used in the automotive industry prior to 2010.

2. Economic Feasibility

Defendants also complain that Mr. Wallingford failed to establish the economic feasibility of his alternative designs. Under Texas law, a plaintiff's evidence of feasibility need not be exhaustive.⁶¹ In fact, as defendants' briefing concedes, a claimant must introduce cost estimates of an alternative design when the product is not already in use.⁶² Here, it is undisputed that each of Mr. Wallingford's alternative designs was in use, including by the Kia defendants.

⁵⁸ *Id.* App. at p. 17.

⁵⁹ Exhibit D, App. at pp. 39-40.

⁶⁰ Exhibit L, App. at pp. 107-108.

⁶¹ *Brochtrup v. Mercury Marine*, 426 F. App'x 335, 339 (5th Cir. 2011).

⁶² Defs' Motion to Exclude, p. 24, nt. 101, *citing Flynn v. Am. Honda Motor Co.* No. 4:11-CV-3908, 2015 WL 75270, at * 5 (S.D. Tex. Jan. 6, 2015), *citing Casey v. Toyota Motor Eng'g & Mfg. N. Am., Inc.*, 770 F.3d 322, 330 (5th Cir.2014).

To the extent that cost estimates are necessary, defendants' arguments still fail. At his deposition, Mr. Wallingford testified regarding the scope of his opinions:

- Q. What is the subject area you've been retained to analyze in this case?
- A. As indicated on the first page, excuse me, of my report, we were retained to address the issue of determining whether the fuel system on the subject vehicle was defectively designed and/or manufactured, and if so, to identify alternatives that could have been implemented from an engineering perspective, economic perspective that would if -- if implemented prevented the subject accident from occurring.⁶³

Despite Mr. Wallingford's testimony that he had analyzed the economics of the alternatives he was proposing, defense counsel did not ask him a single question about the economic feasibility of any of his safer alternative designs. Defendants are not entitled to benefit from perceived holes in the evidence that they are responsible for creating.

Had defendants asked, Mr. Wallingford would have testified that the additional cost would have added little to the purchase price of the Kia Soul, measured in tens, not hundreds, of dollars.⁶⁴ Courts recognize that sufficient economic feasibility evidence can include testimony that the added cost would not "render the vehicle so expensive that it's impractical to purchase it."⁶⁵ Evidence of the widespread use of fuel tank shields, fuel tank straps and metal access port covers, including on Kia vehicles, demonstrates the economic feasibility of these technologies and is supported by Mr. Wallingford's analysis, as well.⁶⁶

3. Specificity of Designs

Defendants next claim is that Mr. Wallingford failed to offer specific examples of a fuel tank shield that he believes would have prevent the plaintiffs' injuries. Specifically, defendants criticize Mr. Wallingford for: (1) "refusing" to specify the material for a proposed shield;⁶⁷ (2)

⁶³ Exhibit J, App. at pp. 90-91.

⁶⁴ Exhibit C, App. at pp. 20-21.

⁶⁵ *Goodner v. Hyundai Motor Co.*, 650 F.3d 1034, 1044 (5th Cir. 2011)

⁶⁶ Exhibit C, App. at pp. 20-21.

⁶⁷ Defs' Motion to Exclude Wallingford, p. 15.

failing to specify the angle of the shield;⁶⁸ and (3) failing to offering detailed designs of the shield. Yet again, the facts are inconsistent with defendants' position.⁶⁹

Rather than "refusing to select a material", Mr. Wallingford made clear that a fuel tank shield constructed of *either* metal or polyethylene would have been sufficient to prevent the tank of the Kia Soul from rupturing.⁷⁰ However, because Kia has shown considerable concern about limiting the weight of its vehicles, Mr. Wallingford offered that a plastic shield would have been suitable on the subject Kia Soul.

Defendants next assert that Mr. Wallingford did not provide specific examples or offer any pictures, diagrams or drawings showing the fuel tank shield he considers to be a safer alternative design.⁷¹ Defendants' statements are demonstrably false.

Mr. Wallingford provided drawings, diagrams and dozens of photographs to defense counsel during his deposition.⁷² These source materials depict the specific fuel tank shielding he contends would have prevented the plaintiffs' injuries in this case. Mr. Wallingford clearly identified currently-existing vehicles using the kinds of shielding he proposed for the Kia Soul and provided photo-documentation, diagrams and drawings that defense counsel referenced in his questioning:

- Q. What, if anything, was significant with regard to any observations in connection with the inspection of the 2010 Honda Fit with regard to your work in this case?
- A. Once again, the Honda Fit is one of those vehicles that has a very large underbody shield covering the fuel tank and complete cavity, including all the fuel lines and related components. It is a polymer shield. It appears that the tank is retained by straps in this particular vehicle, and once again, I measured the ground clearance to the bottom of the shield and Mr. Scofield, in fact, made a sketch of that vehicle. The Honda Fit is one of the vehicles I also looked at, not this particular one, but a 2008 Honda Fit.
- Q. What's -- could you show me a picture or drawing or diagram of the shield you referred to as an underbody shield?

⁶⁸ *Id.*

⁶⁹ *Id.* at p. 16.

⁷⁰ Exhibit J, App. at p. 93.

⁷¹ Defs' Motion to Exclude Wallingford, p. 16.

⁷² Exhibit C, App. at p. 21.; Exhibit J, App. at pp. 87-89.

- A. Certainly. First thing I'll hold up in front of the camera is this is what a Honda Fit looks like and amazingly close to the Kia vehicle, and in response to your question I'll hand you these three photographs that show underbody polymer shield protects the fuel tank.⁷³

And, in response to questions regarding whether specific shields depicted in the photographs would have prevented plaintiffs' injuries, he testified:

- A. My opinion the shield itself would deflect the vehicle up over the top of the inverted -- you're calling it a pipe flange. I don't believe it would make contact with the fuel tank.⁷⁴

In total, Mr. Wallingford provided dozens of pages of documents and photographs showing the efforts taken by at least six of defendants' competitors to protect their vehicle's fuel tanks.⁷⁵ Mr. Wallingford indicates that these shields were available to use on the Kia Soul and would have prevented or significantly reduced the risk of plaintiffs' injuries.⁷⁶

Perhaps the most egregious claim in defendants' briefing is that Mr. Wallingford "could not identify a single passenger car manufacturer who had a shield of the type he described."⁷⁷ As shown above, this claim is simply not true. Moreover, on at least one occasion during his deposition when Mr. Wallingford attempted to identify specific vehicles using the designs he proposes, defense counsel interrupted his testimony and prevented him from answering:

- Q. So as you sit -- whether it takes development and you have to figure it out with testing or not, you can't identify a single passenger car manufacturer who has a shield of the type you just described on their passenger car tank, can you? Yes or no?
- A. With 15 degrees?
- Q. Fifteen to 45, you know, developed the way you think it should be developed, with whatever angle is appropriate?
- A. Sitting here today, no, I cannot identify that.
- Q. Thank you.

⁷³ Exhibit J, App. at p. 87.

⁷⁴ *Id.* App. at p. 86.

⁷⁵ Exhibit C, App. at p.21 ; Exhibit J, App. at p. 87-89;93.

⁷⁶ Exhibit C, App. at p.29 ; Exhibit D, App. at p. 44-45; 50-52.

⁷⁷ Defs' Motion to Exclude Wallingford, p. 23.

A. But if you'll give me just a second here and we'll look at the angle of the shields in the photographs that were taken as shown in 2-D -- 2-E.

Q. I'll tell you what, you know, we can all go look at those six vehicles and see if any of them have a plastic shield with an angle to the front of it so why don't we just move on.⁷⁸

Again, the photographs marked Exhibit 2-D and 2-E depict the fuel tank shields used by Kia's competitors, including the Honda Fit.⁷⁹ Defendants made the strategic decision to shush Mr. Wallingford during his deposition. They cannot now complain about it.

D. Facts and Data Supporting the Use of a Fuel Tank Shield Alternative

Defendants' suggest that Mr. Wallingford's fuel tank shield proposal is not based upon sufficient facts and data.⁸⁰ Defendants correctly note that Mr. Wallingford is relying upon plaintiffs' other expert, Mike McCort, for purposes of accident reconstruction.

Defendants argue that because Mr. McCort did not calculate the amount of force it takes to rupture the fuel tank of the Kia Soul, Mr. Wallingford's fuel tank shield theory is not based upon sufficient facts and data.⁸¹

There are several obvious flaws with defendants' logic. First, as defendants' own briefing acknowledges, Mr. Wallingford's opinions are that if a fuel tank shield was utilized, the ground clearance for the fuel tank would not have been compromised and the "Yield" sign base would likely have been avoided.⁸² Consequently, defendants' arguments are nonsensical.

Second, Mr. McCort's accident reconstruction does provide all of the variables regarding the forces that acted on the fuel tank during the crash in question. Specifically, the vehicle's loaded weight was calculated as was its speed when it contacted the "Yield" sign base.⁸³ In short, Mr. McCort provided Mr. Wallingford with the force conditions actually present during the crash, not theoretical forces that were not present.

⁷⁸Exhibit J, App. at pp. 92-93.

⁷⁹Exhibit C, App. at p. 21.

⁸⁰Defs' Motion to Exclude Wallingford, p. 17.

⁸¹*Id.*

⁸²Exhibit D, App. at p.

⁸³Exhibit K, App. at pp 101-102.

E. Facts and Data Supporting Fuel Tank Straps Alternative

Defendants next challenge the facts and data supporting Mr. Wallingford's safer alternative designs.⁸⁴ In particular, Defendants argue that because Mr. Wallingford cannot calculate the precise distance the fuel tank dropped during the collision, he cannot establish that his alternative designs would have made a difference to the outcome in this case.⁸⁵ Defendants ignore several pieces of undisputed evidence.

First, if fuel tank straps were utilized, the Kia Soul would necessarily *gain* more than two inches of ground clearance. This increase is attributable to the manner in which fuel tank straps secure a vehicle's fuel tank.

Jae Hwa Park was the 30(b)(6) designee selected by defendants to testify regarding the fuel system of the 2010 Kia Soul. In the state-court action, Mr. Park testified that fuel tank straps result in the fuel tank being secured up against the floor pan of the vehicle so that it cannot move or shift:

Q. Whenever you have a strap-mounted fuel tank, the fuel tank can actually shift, can it not? It can give?

A. When the fuel tank is being mounted with the strap, the fuel tank is attached to the floor all the way so therefore it does not move.⁸⁶

Mr. Wallingford has testified that if straps were used, the fuel tank of the 2010 Kia Soul would be raised an additional 2 ¼ inches without the need for modifications to the floor pan of the vehicle and additional 1 ½ inches with minor modifications.⁸⁷ In other words, by utilizing the already-existing space above the fuel tank, the ground clearance of the fuel tank could be increased by 2 ¼ inches simply by using fuel tank straps. In fact, the additional space above the tank would have to be utilized because, as Mr. Park testified, straps secure the fuel tank directly against the underbody of the vehicle.

⁸⁴ Defs' Motion to Exclude Wallingford, p. 19.

⁸⁵ *Id.*

⁸⁶ Exhibit B, App. at p. 5.

⁸⁷ Exhibit J, App. at pp. 88-89.

Increasing ground clearance is critical considering that difference between hitting and missing the Yield sign base was a matter of inches, if not fractions of inches. Mr. Wallingford opined that using straps to utilize the additional space above the fuel tank would result in sufficient ground clearance for the Yield sign base to miss the fuel tank.⁸⁸ Moreover, Mr. Wallingford has opined, consistently with defendants' testimony, that the use of straps prevents the tank from moving downward. Consequently, any downward movement of the fuel tank on the subject vehicle is irrelevant because the subject vehicle did *not* use straps and straps would have increased ground clearance sufficiently to avoid contacting the sign post base.

F. Safer Alternative Designs Capable of Being Produced

Defendants next challenge Mr. Wallingford's opinions by claiming that he needed to conduct testing of each of his proposed safer alternative designs.⁸⁹ Defendants concede that Mr. Wallingford was not obligated to construct "prototypes" of his proposed alternative designs.⁹⁰

In *Gen. Motors Corp. v. Sanchez*, 997 S.W. 2d 584 (Tex. 1999), the Texas Supreme Court addressed a nearly identical argument from an automaker. In *Sanchez*, General Motors claimed that plaintiffs did not establish a safer alternative design because they "offered no testing evidence or engineering principles to show his design was safer."⁹¹ Absent testing, General Motors contended that plaintiffs' expert's opinions amounted to mere speculation.⁹² The Court disagreed:

However, the plaintiffs did not have to build and test an automobile transmission to prove a safer alternative design. A design need only prove "capable of being developed." The *Restatement (Third) of Torts: Products Liability* takes the position that "qualified expert testimony on the issue suffices, even though the expert has produced no prototype, if it reasonably supports the conclusion that a

⁸⁸ Exhibit D, App. at p. 51.

⁸⁹ Defs' Motion to Exclude, pp. 19-22.

⁹⁰ Defs' Motion to Exclude, p. 22.

⁹¹ *Sanchez*, 997 S.W. 2d at 591.

⁹² *Id.*

reasonable alternative design could have been practically adopted at the time of sale.”⁹³

On May 8, 2015, the Texas Supreme Court reiterated that testing is not a prerequisite to establishing a safer alternative design. In *Genie Indus., Inc. v. Matak*, No. 13-0042, 2015 WL 2173786 (Tex. May 8, 2015), the Texas Supreme Court repeated that under Texas law, a claimant is not required to build and test a proposed design, but rather need only demonstrate that the alternative design was “capable of being developed”:

A safer alternative design is one that would have prevented or significantly reduced the risk of the injury, would not substantially impair the product's utility, and was economically and technologically feasible at the time. This design need not be actually built and tested; a plaintiff must show only that the alternative design was “capable of being developed.”⁹⁴

Defendants have not contested that the safer alternative designs proposed by Mr. Wallingford are capable of being developed, nor could they. Mr. Wallingford's alternative designs have been in existence for decades and have been widely used in the automotive industry, including by defendants. There is no dispute that fuel tank shields have been used automakers since the 1970s to prevent their tanks from rupturing.⁹⁵ There is no dispute that defendants' own expert employed fuel tank shields on every fuel system he had responsibility for designing.⁹⁶ There is no dispute that defendants have used fuel tank shields on at least some of their vehicles.⁹⁷ In summary, there is no question that Mr. Wallingford's fuel tank shield designs are capable of being developed because they *have* been developed.

The same is true for reinforcing straps to secure a vehicle's fuel tank. It bears repeating that, according to defendants' own expert, he is unaware of any Ford vehicles from the mid-1970s to the present that uses anything other than straps to secure their fuel tanks.⁹⁸ Of the

⁹³ *Id.* at 592.

⁹⁴ *Id.* at *4, citing *Gen. Motors Corp. v. Sanchez*, 997 S.W. 2d 584 (Tex. 1999) (emphasis supplied).

⁹⁵ Exhibit B, App. at pp. 8-10.

⁹⁶ *Id.* App. at p. 10.

⁹⁷ Exhibit D, App. at pp. 39-40.

⁹⁸ Exhibit B, App. at pp. 13-14.

five fuel systems Mr. Ridenour designed, each used straps to secure the vehicles' tanks.⁹⁹

Only two Kia vehicles have used anything other than straps to secure their fuel tanks.¹⁰⁰ Fuel straps certainly are "capable of being developed" because they too have long existed.

Finally, there is no dispute that metal fuel pump access port covers have been used by automakers, including Kia. In fact, Defendants' 30(b)(6) designee, Mr. Park testified:

Q. Let me ask you, has Kia ever used metal fuel pump service covers on any of its other vehicles?

A. Yeah, have been used.¹⁰¹

In summary, all of Mr. Wallingford's safer alternative designs are feasible because they have been widely used in the automotive industry long before 2008.¹⁰²

Mr. Wallingford has designed, manufactured and performed a considerable amount of fuel tank shield properties during his career.¹⁰³ As a result, his opinions regarding the properties of fuel tank shields are solidly supported.

In fact, defendants' expert agrees that extensive testing by automakers has been performed to ensure the efficacy of shielding technology. Mr. Ridenour has testified that certain Panther Platform vehicles were involved in collisions involving speeds in excess of 100 miles per hour.¹⁰⁴ The engineering fix that Ford believed was an effective solution for these severe, high speed collisions, included shields designed to prevent tank rupture.¹⁰⁵

The Kia Soul was traveling at approximately 23 miles per-hour when it hit the "Yield" sign in the case at bar.¹⁰⁶ The "Panther Platform" testing—conducted to address speeds in excess of 100 miles per hour—supports Mr. Wallingford's belief that a fuel tank shield would have been effective at preventing tank rupture in a crash that occurred at a fraction of the speed.

⁹⁹ Exhibit B, App. at pp. 11-12.

¹⁰⁰ Exhibit A, App. at p. 5.

¹⁰¹ Exhibit L, App. at pp. 107-108.

¹⁰² Exhibit D, App. at 37-38; Exhibit J, App. at p. 84

¹⁰³ Ex. J, App. at p.

¹⁰⁴ Exhibit B, App. at p. 73.

¹⁰⁵ Id., App. at pp. 16-17.

¹⁰⁶ Exhibit K, App. at p. 102.

Defendants' attack of Mr. Wallingford opinions regarding the use of reinforcing fuel tank straps is also unjustified. As defendants are aware, Mr. Wallingford obtained and inspected an undamaged, "exemplar" 2010 Kia Soul.¹⁰⁷ As a part of his inspection, he removed the vehicle's fuel tank and measured the space existing above the tank, in between the vehicle's floor pan.¹⁰⁸ Therefore, Mr. Wallingford's opinions regarding the efficacy of using fuel tank straps to increase the vehicle's ground clearance is based on his documented measurements and simple arithmetic, not on speculation, as defendants contend. This methodology is also the same as those employed by each of defendants' experts in this case.

G. Risk-Utility Analysis

Defendants pivot to challenge Mr. Wallingford's testimony by claiming that he cannot establish his alternative designs are "feasible from the standpoint of overall safety."¹⁰⁹ Defendants state that Mr. Wallingford "presented no evidence that any risks were outweighed by the utility of the alternative designs."¹¹⁰

There are several problems with this argument. First, Mr. Wallingford did perform a risk-utility analysis of the alternative designs he proposes. In his report Mr. Wallingford stated "The use of a fuel tank shield would not have hindered the performance of the vehicle and was certainly feasible considering the widespread use of such shields on other vehicles in the automotive industry, including on similar types of cars."¹¹¹ However, as with the economic feasibility of his designs, defendants chose not to ask Mr. Wallingford any questions about his risk-utility analysis during his deposition.¹¹²

Had they done so, Mr. Wallingford would have reiterated that the obvious benefits of utilizing fuel tank shielding or fuel tank straps is that each is designed to minimize the risk of the

¹⁰⁷ Exhibit D, App. at p. 34.

¹⁰⁸ Exhibit J, App. at pp. 88-89.

¹⁰⁹ Defs' Motion to Exclude, p. 25.

¹¹⁰ *Id.*

¹¹¹ Exhibit D, App. at p. 45.

¹¹² Exhibit C, App. at p. 20.

fuel tank rupturing during a collision this one.¹¹³ Any impairment, including the added weight of using a shield, straps, or both, is outweighed by the protective benefits to the fuel tank.¹¹⁴

Similarly, the benefit of using a metal fuel pump access port cover is that you minimize the risk of fire penetrating the passenger compartment directly beneath the rear seat passenger bench in a crash event like the present one.¹¹⁵ While metal is typically heavier than plastic, and potentially more expensive, the protective benefits of insulating the passenger cabin from the explosive force in the fuel tank outweighs any potential costs.¹¹⁶

Defendants had the opportunity to depose Mr. Wallingford regarding each of his opinions, including his risk-utility analysis of his alternative designs. It is one thing to allege that Mr. Wallingford did not *perform* a risk-utility analysis and another the say that defendants did not *question* him about it. The latter is accurate while the former is not.

Additional evidence that the recognized utility of using fuel tank shields, reinforcing straps and metal covers to seal of the passenger cabin near the fuel tank, is shown by common usage of these components, including by defendants. It is disingenuous for defendants to contest the utility of these three “alternatives” considering that millions of Kia vehicles currently utilize at least one of them.

Mr. Wallingford's Crashworthiness Opinions

Defendants conclude by attacking Mr. Wallingford's opinion that the 2010 Kia was defective because it did not provide the rear seat passengers a reasonable opportunity to escape the vehicle before the fire breached the passenger compartment.¹¹⁷ However, defendants' expert, Michael Klima, *agrees* with Mr. Wallingford that three of the four doors of the Kia Soul that is the subject of this litigation, including the two rear doors, were inoperable following the crash:

¹¹³ Exhibit C, App. at pp. 20-21..

¹¹⁴ *Id.*

¹¹⁵ *Id.*

¹¹⁶ *Id.*

¹¹⁷ Defs' Motion to Exclude Wallingford, pp. 26-27.

Q. Now, you've reviewed the physical damage to all of the various doors of the subject Kia Soul, right?

A. In my inspections, yes, sir.

Q. And your inspections, I believe your opinions are that the doors of the, rear doors and the right front door were inoperable as a result of the collision?

A. Yes.¹¹⁸

Mr. Klima also acknowledges that eyewitness testimony that each of the rear seat passengers struggled to unlatch their seatbelts following the crash and that Mr. Sims' seatbelt was found in the latched position even after the fire was extinguished.¹¹⁹

Automakers are responsible for taking reasonable steps to design vehicles that afford passengers a reasonable measure of safety in the event a collision occurs. This concept is sometimes referred to as "crashworthiness."¹²⁰ One element of vehicle crashworthiness is that if passengers survive the initial collision, sound engineering principles dictate that they should not die in a subsequent fire.¹²¹

Here, we have undisputed evidence that three of the four vehicle doors, including the two closest to Mr. Sims, were inoperable after the crash. We also have undisputed evidence that each of the three rear seat passengers had difficulty unlatching their seatbelts and that Mr. Sims' seatbelt remained latched after the fire was extinguished.

Mr. Wallingford is entitled to testify that it is unreasonable to expect passengers seated in the rear seat of a burning vehicle to crawl into the front seat if they expect to survive, particularly if the passengers are elderly individuals who were just involved in a collision. Mr. Wallingford's challenged opinions are nothing more than undisputed facts. Consequently, defendants' criticisms of them should be rejected.

¹¹⁸ Exhibit M, App. at pp. 111-112.

¹¹⁹ *Id.*, App. at p. 110.

¹²⁰ Exhibit C, App. at p. 21.

¹²¹ *Id.*

V. CONCLUSION

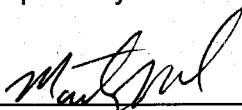
Mr. Wallingford's safer alternative designs have been shown to be economically and technologically feasible. As first described in his expert report, each one was commonly used in the automotive industry, including by the Kia defendants, long before the introduction of the Kia Soul.

Defendants' "testing" requirement for safer alternative designs has been categorically rejected in the last two weeks by the highest authority on Texas law—the Texas Supreme Court. Because all of Mr. Wallingford's proposed alternative designs are, beyond question, "capable of being developed", feasibility has been established.

Defendants' contentions that Mr. Wallingford did not provide specific examples of his proposed alternatives or perform a risk utility analysis, are, as shown above, untrue. Any gaps in the evidence are owing to defendants' tactical decisions during discovery, not flaws in Mr. Wallingford's methodology.

Mr. Wallingford's credentials and methodology are more than sufficient to satisfy *Daubert* and its progeny. Consequently, defendants' motion must be denied.

Respectfully submitted,



STEVE W. BERMAN (*pro hac vice*)

WASB No. 12536

steve@hbsslaw.com

MARTIN D. MCLEAN (*pro hac vice*)

WASB No. 33269

martym@hbsslaw.com

HAGENS BERMAN SOBOL SHAPIRO LLP

1918 Eighth Avenue, Suite 3300

Seattle, WA 98101

Telephone: (206) 623-7292

Facsimile: (206) 623-0594

MARC R. STANLEY

State Bar No. 19046500

marcstanley@mac.com

STANLEY LAW GROUP

6116 N. Central Expressway

Suite 1500

Dallas, TX 75206

Telephone: (214) 443-4301

Facsimile: (214) 443-0358

COUNSEL FOR PLAINTIFFS

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing document has been forwarded to all known counsel of record in this cause in accordance with the Federal Rules of Civil Procedure on this 22nd day of May, 2015.

